



Integrated Device Technology, Inc.
2975 Stender Way, Santa Clara, CA - 95054

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: SR-0407-05 DATE: 9/20/04
Product Affected: IDT71V416S/L

Date Effective: 12/20/2004

MEANS OF DISTINGUISHING CHANGED DEVICES:

- ☒ Product Mark V character on top mark
☐ Back Mark or product name IDT71V416VS/VL
☐ Date Code
☐ Other

Contact: Dennis Lantz
Title: Quality / Reliability Engineer
Phone #: 831-754-4597
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Attachment:: ☒ Yes ☐ No

Samples: Refer to page 2 for sample availability

DESCRIPTION AND PURPOSE OF CHANGE:

- ☒ Die Technology
☒ Wafer Fabrication Process
☐ Assembly Process
☐ Equipment
☐ Material
☐ Testing
☐ Manufacturing Site
☐ Data Sheet
☐ Other

This change is a die revision for a technology upgrade from CMOS 11.5 to CMOS 14. The current Y step die is a CMOS 11.5, 0.18 m, 57K mils² and the new V die step is a Cmos 14, 0.13 m, 32k mils².

RELIABILITY/QUALIFICATION SUMMARY:

Device qualification details shown on attachment verifies that there is no change to the device reliability.

CUSTOMER ACKNOWLEDGMENT OF RECEIPT:

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: _____

☐ *Approval for shipments prior to effective date.*

Name/Date: _____

E-Mail Address: _____

Title: _____

Phone# /Fax# : _____

CUSTOMER COMMENTS:

IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: _____ DATE: _____



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PCN Summary

PCN Type: Mask/Design Change for Die Shrink & Technology Upgrade

Commodity Memory

Forecast or Execute Execute

Planned or Unplanned Planned

Data Sheet Change No

Detail of Change

Die Step Details

Die Revision (step)	Y	V
Wafer Fab Technology	Cmos 11.5	Cmos 14
# Poly Layers	1	1
# Metal Layers	3	4
Minimum Feature Size	0.18 m	0.13 m
Die Dimensions (sq mils)	57k	32k
Gate Ox Thickness	75Å	75Å
Wafer Fab Location	Hillsboro, OR	Hillsboro, OR

Sample Availability: Now

Production Shipments: Production shipments for V step are available now. Customer shipments will start December 20, 2004 unless specifically requested. The Y step will continue to ship concurrently with the V step.



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Qualification Plan #: QS-0212-15
Test Vehicle: 71V416V

Qualification Results

Package Type: TSOP-44

TEST DESCRIPTION	Sample Size / # Fails
High Temperature Operating Life (Dynamic) JESD22-A108, +125°C @ 1000 hours or equivalent	116 / 0
Highly Accelerated Stress Test: JEDEC STD 22, Method A110, Biased, @+130°C, +85%RH, 3 Atm, 100 hours*	45 / 0
Autoclave: EIA/JESD22-A102 @ 2 ATM, Saturated Steam @ 121°C, 168 hours*	45 / 0
Temperature Cycling: JESD22-A104, Condition C, -65°C to +150°C, 500 cycles*	45 / 0
High Temp Storage: JESD22-A103 +150°C, 1000 hours	77 / 0
ESD: Human Body Model @ 2000 Volts Mil-Std-883, method 3015	3 / 0
ESD: Charged Device Model @ 500 Volts JEDEC 22-101	3 / 0
Latch-up EIA/JESD STD-78	6 / 0

* Preconditioning per JESD22-A113B Level 3



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Affected Part Numbers

IDT71V416S10BE8	IDT71V416L15PHI8
IDT71V416S12BE8	IDT71V416S10BE
IDT71V416S12BEI8	IDT71V416S12BE
IDT71V416S15BE8	IDT71V416S12BEI
IDT71V416S15BEI8	IDT71V416S15BE
IDT71V416L10BE	IDT71V416S15BEI
IDT71V416L12BE	IDT71V416S10Y
IDT71V416L15BE	IDT71V416S10Y8
IDT71V416L10Y	IDT71V416S12Y
IDT71V416L10Y8	IDT71V416S12Y8
IDT71V416L12Y	IDT71V416S12YI
IDT71V416L12Y8	IDT71V416S12YI8
IDT71V416L12YI	IDT71V416S15Y
IDT71V416L12YI8	IDT71V416S15Y8
IDT71V416L15Y	IDT71V416S15YI
IDT71V416L15Y8	IDT71V416S15YI8
IDT71V416L15YI	IDT71V416S10PH
IDT71V416L15YI8	IDT71V416S10PH8
IDT71V416L10PH	IDT71V416S12PH
IDT71V416L10PH8	IDT71V416S12PH8
IDT71V416L12PH	IDT71V416S12PHI
IDT71V416L12PH8	IDT71V416S12PHI8
IDT71V416L12PH/3142	IDT71V416S15PH
IDT71V416L12PHI	IDT71V416S15PH8
IDT71V416L12PHI8	IDT71V416S15PHI
IDT71V416L15PH	IDT71V416S15PHI8
IDT71V416L15PH8	IDT71V416S20PH
IDT71V416L15PHI	